

REC'D NEW YORK AUG -6 1921
REPORT ON BOILERS.

No. 629

MON. AUG. 22 1921

See Log 1st E. Mach. Rpt 3575

Received at London Office

Date of writing Report Apr. 13 1921. When handed in at Local Office Apr. 13 1921. Port of Portland, Oregon

No. in Survey held at Portland, Oregon. Date, First Survey Oct. 7, 1920. Last Survey Mar. 1, 1921.

Reg. Book. on the Southwestern Shipbuilding Co.'s hull No. 24. (Number of Visits 9) } Gross Tons } Net

Master _____ Built at _____ By whom built _____ When built _____

Engines made at _____ By whom made _____ When made _____

Boilers made at Portland, Ore. By whom made Willamette Iron & Steel Works When made 1921

Registered Horse Power _____ Owners _____ Port belonging to _____

MULTITUBULAR BOILERS—~~MAIN AUXILIARY OR~~ DONKEY.—Manufacturers of Steel Midvale Steel & Ordnance Co.

(Letter for record Mar. 2 '21) Total Heating Surface of Boiler 1272 Coal Is forced draft fitted Burning No. and Description of Boilers One Single End Scotch Working Pressure 120 Tested by hydraulic pressure to 230 Date of test Mar. 1, 21.

No. of Certificate 223 Can each boiler be worked separately Area of fire grate in each boiler No. and Description of safety valves to each boiler _____ Area of each valve Pressure to which they are adjusted

Are they fitted with easing gear In case of donkey boilers, state whether steam from main boilers can enter the donkey boiler

Smallest distance between boilers or uptakes and bunkers or woodwork Mean dia. of boilers 11'-3" Length 10'-7 1/2"

Material of shell plates Steel Thickness 11/16" Range of tensile strength 71680 Are the shell plates welded or flanged Hds. Flanged.

Descrip. of riveting: cir. seams D.R. long. seams Double Butt Strap Diameter of rivet holes in long. seams 3/16" Pitch of rivets 7 1/2" & 3 1/2"

Lap of plates or width of butt straps 17" Per centages of strength of longitudinal joint rivets 159.7% Working pressure of shell by rules 123 Size of manhole in shell 12x16 Size of compensating ring 28 3/8 x 32 3/8 x 11/16" No. and Description of Furnaces in each boiler 2 Morrison Material Steel Outside diameter 39-7/8" Length of plain part top 7/16" Thickness of plates bottom 7/16"

Description of longitudinal joint No. of strengthening rings Working pressure of furnace by the rules 157.8 Combustion chamber plates: Material Steel Thickness: Sides 1/2" Back 5/8" Top 1/2" Bottom 13/16" Pitch of stays to ditto: Sides 6 1/2" x 8" Back 8 1/2" x 9"

Top 7 3/4" x 8" If stays are fitted with nuts or riveted heads R.H. Working pressure by rules 120.4 Material of stays Steel Area at smallest part 1.217 Area supported by each stay 76.5 Working pressure by rules 143 End plates in steam space: Material Steel Thickness 3/4"

Pitch of stays 14x14 3/4" How are stays secured Double Nuts Working pressure by rules 121.8 Material of stays Steel Area at smallest part 4.095

Area supported by each stay 206.5 Working pressure by rules 217 Material of Front plates at bottom Steel Thickness 3/4" Material of Lower back plate Steel Thickness 3/4" Greatest pitch of stays 12 1/4" Working pressure of plate by rules 124.6 Diameter of tubes 2 3/4"

Pitch of tubes 3 3/4" x 3-7/8" Material of tube plates Steel Thickness: Front 3/4" Back 9/16" Mean pitch of stays 9 1/2" x 9 1/2" Pitch across wide water spaces 12-7/8" Working pressures by rules 121.6 Girders to Chamber tops: Material Steel Depth and thickness of girder at centre 11/16" x 9" Length as per rule 30" Distance apart 7 3/4" Number and pitch of Stays in each 3-8"

Working pressure by rules 203.1 Steam dome: description of joint to shell _____ % of strength of joint _____

Diameter _____ Thickness of shell plates _____ Material _____ Description of longitudinal joint _____ Diam. of rivet holes _____

Pitch of rivets _____ Working pressure of shell by rules _____ Crown plates _____ Thickness _____ How stayed _____

SUPERHEATER. Type _____ Date of Approval of Plan _____ Tested by Hydraulic Pressure to _____

Date of Test _____ Is a Safety Valve fitted to each Section of the Superheater which can be shut off from the Boiler

Diameter of Safety Valve _____ Pressure to which each is adjusted _____ Is Easing Gear fitted

VERTICAL DONKEY BOILER— No. _____ Description _____ Manufacturers of steel _____

Made at _____ By whom made _____ When made _____ Where fixed _____ Working pressure _____

Tested by hydraulic pressure to _____ Date of test _____ No. of Certificate _____ Fire grate area _____ Description of safety valves _____

No. of safety valves _____ Area of each _____ Pressure to which they are adjusted _____ If fitted with easing gear _____ If steam from main boilers can enter the donkey boiler _____

Dia. of donkey boiler _____ Length _____ Material of shell plates _____ Thickness _____ Range of tensile strength _____

Descrip. of riveting long. seams _____ Dia. of rivet holes _____ Whether punched or drilled _____ Pitch of rivets _____

Per centage of strength of joint _____ Rivets _____ Working pressure of shell by rules _____ Thickness of shell crown plates _____

Radius of do. _____ No. of Stays to do. _____ Dia. of stays _____ Diameter of furnace Top _____ Bottom _____ Length of furnace _____

Thickness of furnace plates _____ Description of joint _____ Working pressure of furnace by rules _____ Thickness of furnace crown plates _____

Radius of do. _____ Stayed by _____ Diameter of uptake _____ Thickness of uptake plates _____

Thickness of water tubes _____

The foregoing is a correct description,
WILLAMETTE IRON & STEEL WORKS. Manufacturer.

Dates { During progress of work in shops - - } Oct. 7. Nov. 23. Jan. 3, 7. Feb. 17, 19, 23, 28. Mar. 1.
{ During erection on board vessel - - - }
{ Total No. of visits 9. }
Is the approved plan of main boiler forwarded herewith _____



GENERAL REMARKS (State quality of workmanship, opinions as to class, &c.)

The Donkey Boiler has been constructed under Special Survey in accordance with the Rules at Portland, Oregon and to the approved plan. The material, tested by the Society's Surveyors, is sound and good and the workmanship good. The Boiler has been forwarded to San Francisco to be fitted on board the Southwestern Shipbuilding Co.'s hull No. 24.

Certificate (if required) to be sent to
(The Surveyors are requested not to write on or below the space for Committee's Minute.)

The amount of Entry Fee .. £	When applied for.
Special .. £19.....
Donkey Boiler Fee .. £	When received.
Travelling Expenses (if any) £19.....

Committee's Minute

New York AUG - 9 1921

Assigned

See S. Fo. 3575

J.A. Yates

Engineer Surveyor to Lloyd's Register of Shipping.

TUE. NOV. 11 1921



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Lloyd's Register Foundation

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